GAMES

PC-2 SOFTWARE LIBRARY

LIMITED WARRANTY

RADIO SHACK Software is licensed on an "AS IS" basis, without warranty. The original CUSTOMER'S exclusive remedy, in the event of a Software manufacturing defect, is its repair or replacement within thirty (30) calendar days of the date of the Radio Shack sales document received upon license of the Software. The defective Software shall be returned to a Radio Shack Computer Center, a Radio Shack retail store, participating Radio Shack franchisee or Radio Shack dealer along with the sales document.

Except as provided herein, RADIO SHACK MAKES NO WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation(s) may not apply to CUSTOMER.

RADIO SHACK SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED OR ALLEGED TO BE CAUSED DIRECTLY OR INDIRECTLY BY "SOFTWARE" LICENSED OR FURNISHED BY RADIO SHACK, INCLUDING, BUT NOT LIMITED TO, ANY INTERRUPTION OF SERVICE, LOSS OF BUSINESS OR ANTICIPATORY PROFITS OR INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES.

Some states do not allow the limitation or exclusion of incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to CUSTOMER.

RADIO SHACK SOFTWARE LICENSE

RADIO SHACK grants to CUSTOMER a non-exclusive, paid-up license to use the RADIO SHACK Software on **one** computer, subject to the following provisions:

A. Except as otherwise provided in this Software License, applicable copyright laws shall apply to the Software.
B. Title to the medium on which the Software is recorded (cassette and/or diskette) or stored (ROM) is transferred to CUSTOMER, but not title to the Software.
C. CUSTOMER shall not use, make, manufacture, or reproduce copies of Software except for use on **one** computer and as is specifically provided in this Software License. Customer is expressly prohibited from disassembling the Software.
D. CUSTOMER is permitted to make additional copies of the Software **only** for backup or archival purposes or if additional copies are required in the operation of **one** computer with the Software, but only to the extent the Software allows a backup copy to be made.
E. All copyright notices shall be retained on all copies of the Software.

The warranties granted herein give the **original** CUSTOMER specific legal rights, and the **original** CUSTOMER may have other rights which vary from state to state.

PC-2 Games™

Table of Contents
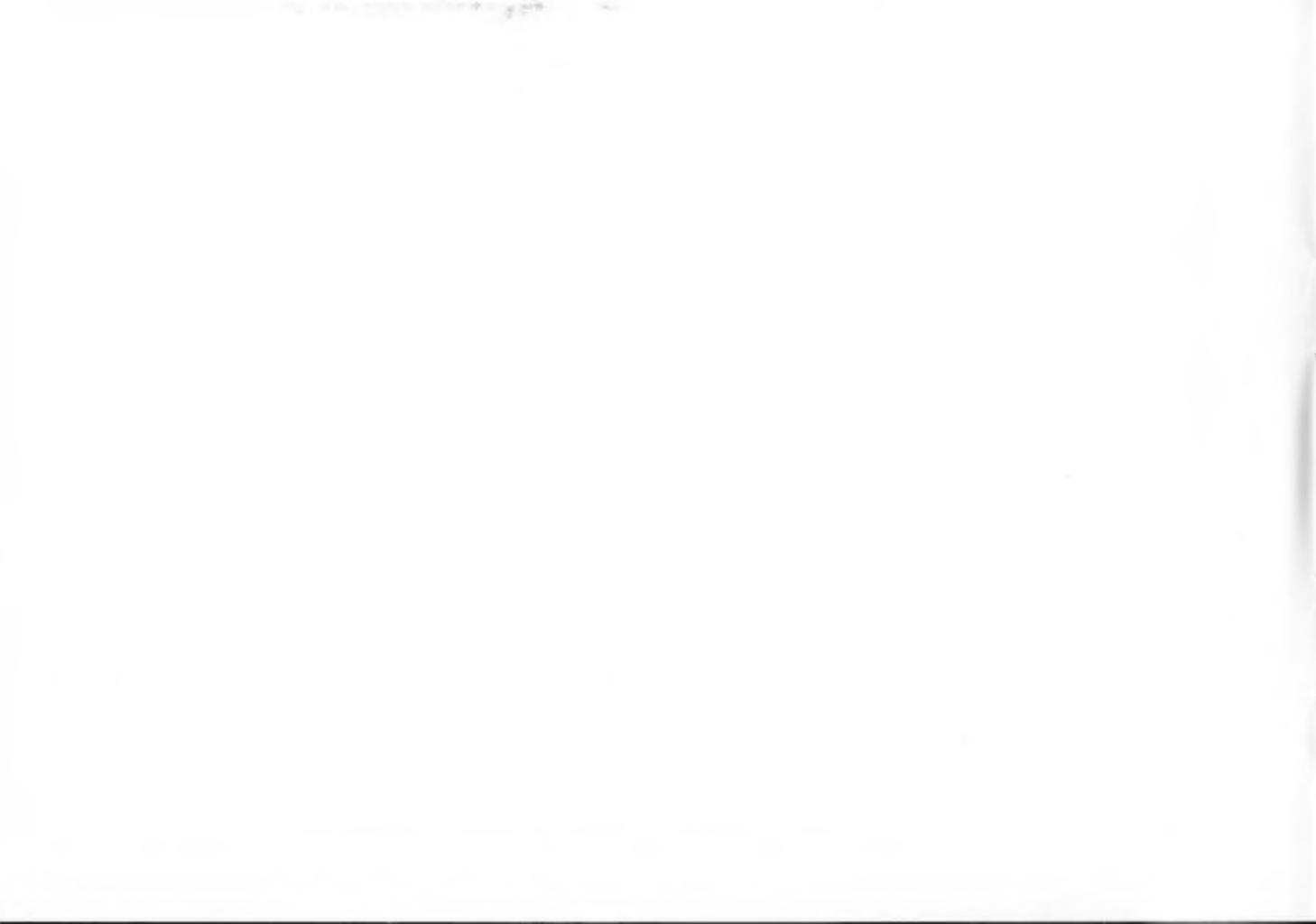
Introduction

The Pocket Computer 2 Games package gives you nine games, some of them old favorites, some of them new. With this package you can sail the high seas, win (or lose) a fortune at the gaming table, or land on the moon. The games range in difficulty from those simple enough for small children, to those complex enough to challenge a Ph.D.

Games consists of:

1. **Twister**—Exercise your logic. Juggle the nine letters or numbers into their proper sequence, in as few moves as possible.

2. **Lander**—Can you safely pilot a landing module to the surface of the Moon? You will need skill and vigilance to succeed.

3. **Blackjack**—Return to the days of the Alaskan gold rush as you wager against the wiley, notorious Yukon Jacques.

4. **Sketch**—More than a game. Sketch turns your PC-2 into a four color, programmable sketchpad.

5. **Soundoff**—Test your memory. Try to match the computer's "music."

6. **Football**—Why settle for being an armchair quarterback? Be an armchair coach with Football. Lead your team to victory against the computer's team.

7. **Task Force**—Command your own flotilla. Don't let the enemy sink your ships!

8. **Hangman**—Play this classic word-guessing game with a friend, or against the computer.

9. **Tic-Tac-Toe**—An old favorite enters the computer age.

System Requirements

Radio Shack PC-2 Pocket Computer

Printer/Cassette Interface

CTR-80 Cassette Recorder or Minisette 9

Note: We strongly recommend that you refer to Appendix A, "Making a Backup," before you use these new tapes.

General Loading Instructions

Be sure your computer is inserted in the
Printer/Cassette Interface and the tape recorder
plugs are properly connected. Turn on the Pocket
Computer and press the (MODE) key until RUN
appears on the display.

Insert the cassette and set the recorder to PLAY.
Type (C)(L)(O)(A)(D)(") name of game (")
(ENTER). You will hear the program as it loads into
the computer. When the program is loaded and ready
to use, the tape will stop and the computer will show
a > on the left side of the display. If you decide to
stop playing during the run of a game press
(BREAK), then (CL), to exit the game's program.

Twister

Twister is a game of logic. The computer will display nine characters, either letters or numbers. In as few moves as possible, you must arrange them into numeric or alphabetical order by reversing groups of characters.

Insert the cassette containing Twister. Type
Ⓒ Ⓛ Ⓞ Ⓐ Ⓓ ⊙ Ⓣ Ⓦ Ⓘ Ⓢ Ⓣ Ⓔ Ⓡ ⊙, and
press ⏎ENTER⏎, to load the game. Press ⏎DEF⏎
⏎SPACE⏎ to start Twister. After the game's name and copyright are displayed, the computer will display: (L)etters or (N)umbers? Press Ⓛ to play with Letters, or Ⓝ to play with Numbers, then press ⏎ENTER⏎.

The computer will display nine random characters. Numbers are easier than letters, so we will use numbers for our sample game. Suppose you are given these numbers:

1 2 9 8 5 6 7 4 3

These numbers can be placed in numerical order in two moves. First, to reverse numbers 9 through 3:

The left side of the display will show: ##?. You will enter a number for each "#."

The first number you enter indicates the "rank" of the number that begins the group you want reversed. Press ③, (the third digit begins the group of digits to be reversed). 3 will replace the first "/" on the screen.

If you have pressed a key by mistake, or if you have decided against a move, you can press ⏎CL⏎ to cancel the number. The display will return to: ##?.

The second entry will be the number of characters to be reversed. Press ⑦ to reverse 7 of the digits. 7 will replace the second "/" on the screen. Again, if you change your mind about the move, press ⏎CL⏎ to return the display to: //?.

Press ⏎ENTER⏎ to reverse the characters. The "?" will clear from the screen, and the computer will display the results of your move. The sample move would change the arrangement to:

1 2 3 4 7 6 5 8 9

Your second move would be to reverse numbers 7 through 5: Press ⑤ to represent 7, (the 5th digit in the string). Press ③ to reverse 3 digits.

Press ⏎ENTER⏎. The computer will display:

1 2 3 4 5 6 7 8 9

3

Then, the computer will display:

You won in 2 moves

To summarize this example:

The computer will display: **You type:**

##? 1 2 9 8 5 6 7 4 3	3
3#? 1 2 9 8 5 6 7 4 3	5
35? 1 2 9 8 5 6 7 4 3	ENTER
##? 1 2 3 4 7 6 5 8 9	5
5#? 1 2 3 4 7 6 5 8 9	3
53? 1 2 3 4 7 6 5 8 9	ENTER

1 2 3 4 5 6 7 8 9

You won in 2 moves

Press Q to exit the game.

Lander

You are orbiting the moon, 25 miles above the surface. You must pilot your landing module to a safe landing on Luna. The program for this simulation is based on actual orbital mechanics.

A safe landing is quite difficult. You should read these instructions before starting the game, because even at the lowest speed the computer's display requires all your attention. The perfect landing takes superior skill, concentration, and alertness.

Insert the cassette containing Lander. To load, type `C L O A D " L A N D E R "`, and press `E N T E R`. Press `D E F` `S P A C E` to start Lander. The computer will display the simulation's name and copyright for a few seconds.

At the start of the simulation, the computer will ask you for the apparent speed. Apparent speed controls the speed of the game and determines the level of difficulty.

Choose an apparent speed, from one-tenth the speed of real time to ten times faster than real time. Slower speeds are easiest. A speed of about two to three results in a good combination of realism and speed. Type a number from .1 to 10, then press `E N T E R`, to set the apparent speed.

After you enter the apparent speed, the computer will place the lander in a low, stable Lunar orbit at 132,000 feet (25 miles high) at a speed of 7,572 feet per second, 100 miles away from the landing site.

As you start the landing, the display will be:

$$7572 \quad 132000 \quad 359.9 \quad 99 \quad 100$$

7572—The lander's speed in feet per second.

132000—The lander's distance, in feet, from the surface of Luna.

359.9—The angle of descent, in degrees. For example: 180.0 or 0.0 degrees (no angle) is horizontal (straight across). 45.0 degrees is an angle halfway between no descent and straight down. 90.0 degrees is a vertical line (straight up or down).

A "map" of the orbit, the lander, and Luna at the start of the game would look like this:
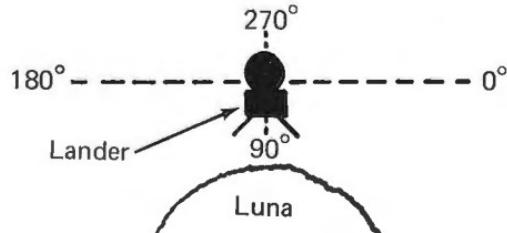
99—The amount of fuel, in percent. 100 would be a full tank; 0 is an empty tank.

100—The horizontal distance to the landing site in miles. This distance is not affected by your distance from the Lunar surface. For example: If the landing site is ten miles ahead, the horizontal distance will show as 10, whether you are 10,000, 100, or 10 miles above the site.

The horizontal distance decreases as you approach the site. If the number of miles on the display is increasing, you are backing away from the site. If the number of miles is negative, you have passed the site.

The computer will update the display about once per second.

To land successfully you must:

- Slow the lander so it drops out of the Lunar orbit.

- Move across 100 miles.

- Descend 25 miles.

- Control the angle and speed of your descent.

Your lander is equipped with retrorockets. They are comparable to the brakes on a car, except they slow your acceleration by firing in the direction opposite the direction in which you are moving (Retro is Latin for backward). In fact, if you apply too much retrofire you may stop the lander or propel the lander backwards, away from your goal.

Your manipulation of the lander's retrorockets determines the angle and speed of your landing. Retrofire is measured in Earth gravities of deceleration (backwards thrust). Number keys ⬛1 through ⬛9 represent 1 through 9 Earth gravities of deceleration.

First, you must slow the lander enough to drop out of the Lunar orbit. Hold down a key from ⬛1 to ⬛9 to control the retrorockets. Retrofire will continue as long as you hold the key.

When you need to let the lander coast to maintain a smooth descent, do not press a key. While you coast, Luna's gravity will gradually increase your speed.

As the retrorockets slow the lander in its orbit, it will arc down toward the moon. The lander tilts at the same angle as its descent angle, because the retrorockets always fire straight ahead. You must control the lander's arc so that it arrives at the landing site upright.

To land successfully, you must touch down at a speed of less than 20 feet per second, with a descent angle between 70 and 110 degrees.

If the landing descent speed is over 100 feet per second, the landing is fatal. Running out of fuel is fatal. A landing slower than 100 feet per second, but faster than 20 feet per second, is merely painful. A landing with a tilt greater than 20 degrees off the vertical will tip the lander and result in a rolling, bouncing arrival. A good landing is a crowning achievment in the career of any Moon Pilot.

Blackjack

1883—It's payday in Ft. Yukon. You saunter through the swinging doors of the Golden Dog Saloon, past the enormous gilt statue of a Malamute sled-dog. With a cocky glint in your eye, you challenge the infamous card sharp and roughneck, Yukon Jacques (alias PC-2), to a game of Blackjack.

Insert the cassette containing Blackjack. Type
ⒸⓁⓄⒶⒹ"ⒷⓁⒶⒸⓀ Ⓙ Ⓐ ⒸⓀ",
and press ⎯E⎯N⎯T⎯E⎯R⎯. Start the game by pressing
⎯D⎯E⎯F⎯ ⎯S⎯P⎯A⎯C⎯E⎯. After the game's name and copyright ar displayed, play will begin.

The object of the game is to get 21, or close to 21 points, without going over 21 ("busting"). Another rewarding goal can be winning large sums of money.

At the start of the game you have a bankroll of $100. Jacques will ask for your wager. You can bet any amount, up to your entire bankroll. Use the number keys to type your wager, then press ⎯E⎯N⎯T⎯E⎯R⎯.

Yukon Jacques will deal you (and himself) two cards; the first face-down and the second face-up. These are called the down-card and the up-card. You will be shown both of your cards and the dealer's up-card. These cards will show for about four seconds.

Each card has a point value: Cards 2 through 9 are worth 2 through 9 points; tens and face cards are worth ten points. Aces are worth one or eleven points; the computer will decide the value of aces.

If your first two cards total 21 points, you "Blackjack." You win the hand and get 3:2 odds on your wager. If Jacques gets 21, he wins. If neither you or Jacques Blackjacks, you will be asked:

(S)tand (H)it or (D)ouble?

Press ⎯S⎯ to Stand, ⎯H⎯ to take a Hit (another card), or ⎯D⎯ to Double.

Stand when you are satisfied with your hand. The dealer will take hits or stand, then show his down-card. The high score will win the pot, then the next hand will start.

Take a Hit to get another card and raise your points (hopefully without busting).

Press ⎯D⎯ to Double the stakes and get one more card. You may Double only before hits are taken. Jacques will take hits or stand. The high score wins, then the next hand will start. "Push" means tie. When you and Jacques tie, neither wager is won or lost.

The game ends when you run out of money.

8

Sketch

Sketch lets you use the PC-2, with attached printer/plotter, as a four-color, programmable sketchpad.

Insert the cassette containing Sketch. Type
C L O A D " S K E T C H ", and press
ENTER. Press DEF SPACE to start. After the title and copyright are displayed, the computer will display:

0 0 BLK UP ↑ 1

0 0—Shows you the pen's present X and Y coordinates. Sketch starts with the pen at 0 0. X is measured horizontally and increases from left to right. Y is measured vertically and increases from bottom to top. This X Y coordinate system is identical to the system used by the PC-2's plotting and drawing commands, and is described in-depth in the PC-2 Printer/Interface Owner's Manual.

BLK—The current ink color: BLK = black, BLU = blue, GRN = green, or RED. Sketch starts with black ink.

UP—The present pen status, UP or DN (down). When the pen is up, it does not touch the paper. When the pen is down, it draws as it moves. Sketch starts with the pen up.

↑—The current text rotation direction. The arrow shows the direction in which text labels will be printed. The program starts at rotation 0, indicated by a ↑, showing that printing will occur left-to-right.

1—The present character size (CSIZE), from 1 to 9. This indicates the size of the printed text labels.

Basic Commands

Sketch recognizes the following keys. Each key is associated with a command.

↑, ↓, ←, →—Moves the pen in the indicated direction.
0, 1, 2, 3—Selects color. 0 is black, 1 is blue, 2 is green, and 3 is red.
P—Changes Pen status from UP to DN, from DN to UP.
O—Draws a circle or arc.
I—Draws a straight line.
R—Sets text Rotation.
S—Sets text Size.
T—Prints a Text label.
Q—Exits the program.
CL (Clear)—Sets the current pen location as coordinates (0 0).

9

Moving the Pen

Press any of the four arrow keys to move the pen. The pen moves in steps of 1 millimeter (about .05 of an inch), four steps per second, as long as you hold down the key. As the pen moves, the X and Y coordinate display changes to show the current pen coordinates. The coordinates increase or decrease, depending on the pen's direction, by fives, for example: 0...5...10, or -15...-20...-25. The pen will draw as it moves if the pen position is down.

Setting a Color

Press a number, ⓪-③, to set the color. As you change the color, the computer will display the current color. When you change colors, the pen will move to the left side of the carriage. After the change, the pen will return to the previous location.

Setting the Pen Status

The pen status can be UP or DN. When the pen is up and an arrow key is pressed, the pen moves but does not draw. When the pen is down, it draws as it moves.

Press (but do not hold) ℗ to change the pen's

status. If the pen is up, it will change to down; if down, it will change to up. Each time the pen status changes, the display will reflect the change.

Drawing a Line

Press ① to draw a line between any two points. The right side of the display will clear; the coordinate display will remain.

The right of the display will show: Start, ENTER. Use the arrow keys to move the pen to the starting point of the desired line, and press ENTER. The coordinate display will be updated continuously as you do this, and the pen will not draw. The PC-2 will beep to acknowledge your entry.

The display will now show: End, ENTER. Use the arrow keys to move the pen to the line's end point and press ENTER. The PC-2 will beep to acknowledge the entry. The pen will draw the line and remain at the end point.

Drawing a Circle or an Arc

Sketch can draw an arc (or full circle) over any circular curve you can define with three points. The shape and size of the arc or circle is determined by

three entries: start point, mid-arc, and end point. As you enter the coordinates for your start, mid-arc, and end points, keep your eye on the pen, and imagine what size the circle must be to encompass all three points.

Press $\boxed{\text{O}}$ to start defining your arc. The right side of the display will clear, leaving the coordinate display intact.

The display will show: Start, ENTER. Use the arrow keys to place the pen over the arc's starting point, then press $\boxed{\text{ENTER}}$. The coordinate display will be updated continuously, and the pen will not draw. The PC-2 will beep to acknowledge your entry.

The display will show: Mid-arc, ENTER. Use the arrow keys to place the pen over any point which lies on the desired arc, between the start and the end points. Press $\boxed{\text{ENTER}}$. The PC-2 will beep to acknowledge your entry.

The display will show: End, ENTER. Use the arrow keys to move the pen to the point at which you want the arc to end, and press $\boxed{\text{ENTER}}$. The PC-2 will beep to acknowledge your entry. The computer will take about a second to compute an equation for your arc, then it will draw the arc.

If any of the three points lies on the same vertical or horizontal coordinates as any other point, the computer may not be able to solve the equation for the arc. When this happens, the computer will beep once sharply, then jump directly back to the menu.

However, to form a circle you will want your arc to meet at the start and end points. You cannot enter exactly the same point for both start and end, so vary your start and end point by one coordinate. For example: if your start point is 0 0, your end point should be 5 5 or -5 -5. There will be a tiny gap (1 "step" of the pen) in your circle.

Setting Text Rotation

The current text rotation is shown, near the center of the display, as an arrow pointing in the direction the text will be printed. It can be set to print left-to-right, right-to-left, top-to-bottom, or bottom-to-top.

To change the text rotation setting, press $\boxed{\text{R}}$. The arrow on the display will be replaced by a question mark. Press an arrow key for the direction you want. The PC-2 will beep, and the arrow will appear on the display.

Setting Text Size

The computer can print text in any of the PC-2's character sizes, 1 (smallest) through 9 (largest). The current size will show as a digit on the right side of the display.

To change the text size, press S. The size number on the display will be replaced with a question mark. Press a key from 1 to 9 to set the size. The PC-2 will beep to acknowledge your entry.

You must remember the physical limitations of the printer and paper when you set the CSIZE. There is no limit to text printed down from the start point. When you want to print up from the start point, there is a 10 centimeter limit to reverse feed.

See the Sections on CSIZE in your Printer/Interface Owner's Manual for further description, illustrations, and examples of the PC-2's text sizes.

Typing and Printing a Text Label

Press T to print a text label. The computer will display: Text?. Type the text of your label, up to 16 characters, and press (ENTER). The computer will display: Start, ENTER.

Use the arrow keys to move the pen to the text's starting point. This point will correspond to the bottom left corner of the first letter. The coordinate display will reappear as you start to move the pen, and will be updated continuously while you move the pen. The pen will not draw at this time, regardless of its up or down status.

When the pen is at the desired starting point, press (ENTER). The PC-2 will beep to acknowledge your entry, print the text, then the display will return to Text? At this point you can print another label or press (ENTER) to return to the main part of the program.

Resetting the Pen

Press CL to move the origin coordinates (0 0) to the current pen location.

Soundoff

In Soundoff, the computer will produce a series of beep notes which you must match by pressing function keys in the correct order. Each key, when pressed, makes a different beep. Each beep, when produced, has its own symbol on the display, directly above the key which makes the beep.

Insert the cassette containing Soundoff. Type ⒸⓁⓄⒶⒹ⟨"⟩ⓈⓄⓊⓃⒹⓄⒻⒻ⟨"⟩, and press ⟨ENTER⟩. Press ⟨DEF⟩⟨SPACE⟩ to start playing Soundoff.

The computer will display the game's name and copyright. Then you will be given a choice of five levels of difficulty (speeds), from beginner to expert. 1 is easiest; 5 is hardest. Press a key, ⟨1⟩—⟨5⟩, then press ⟨ENTER⟩, to set the level of play.

The computer will display: Ready to Play?. Press ⟨Y⟩ for Yes or ⟨N⟩ for No, then press ⟨ENTER⟩.

The game starts with a single note. If you match it, the computer will add another beep to the sequence, until you miss or until you match sixteen consecutive notes.

Football

Congratulations, Coach! Your team has finally reached the NFL playoffs. Today you will be coaching your team against Coach P. C. Tew's MicroMashers. Both teams are equally skillful, so your coaching ability will determine the outcome of the game.

Insert the cassette containing Football. Type Ⓒ Ⓛ Ⓞ Ⓐ Ⓓ ⓐ Ⓕ Ⓞ Ⓞ Ⓣ Ⓑ Ⓐ Ⓛ Ⓛ ⓐ, and press ⒺⓃⓉⒺⓇ. Press ⒹⒺⒻ ⓈⓅⒶⒸⒺ to start the game. The computer will display the game's name and copyright, then play can begin.

The game is played almost exactly like conventional football, with a few simplifications. The game is not run by quarters. The goal lines do not change; your goal is always at the 0 yard line and the computer's is always at 100. The game runs for a simulated hour by its own measurement, then ends. And, unfortunately, there is no half-time entertainment.

First, the winner of the coin flip is announced. If the computer wins, it will receive; if you win, you get a choice. Press Ⓚ for Kick or Ⓡ or Receive, then press ⒺⓃⓉⒺⓇ.

Each down, a summary of the field position is shown, for example:

> Your ball at 37
> Down 2: 8 yds to go

When the computer has the ball, it will choose a play, then show the results of the play. When you have the ball, the computer will display this menu:

S-R	F-R	S-P	L-P	F-G	Punt
<F1>	<F2>	<F3>	<F4>	<F5>	<F6>

The abbreviations stand for Simple Run, Fancy Run, Short Pass, Long Pass, Field Goal attempt, and Punt. To choose a play, press the F-key under the play's abbreviation.

The four offensive tactics offer different chances of success. The Simple Run is the most likely to succeed and the Long Pass is the least likely. The riskier plays usually gain the most yards. The usual fumbles, interceptions, tackles, etc. can occur at random, and will affect the course of the game.

As your play begins, the computer will display the name of the play. The results will be displayed as the play progresses. At the end of the play, the display will return to the summary of the field position.

After each touchdown, the scoring team will be given a chance to try for the extra point. The computer automatically determines if the point is gained. The computer will display the score each time it changes, and at the end of the game.

Task Force

In Task Force, you battle the computer for control of
the sea. Each of you commands a naval flotilla on a
9x9 playing area. You will direct your artillery fire at
the enemy's flotilla. To win, you must sink all the
enemy's ships.

Insert the cassette containing Task Force. Type
C L O A D " T A S K F O R C E ",
and press E N T E R . Press D E F S P A C E to
start the game. After the game's name and copyright
are displayed, you will be asked to set up your
flotilla. The computer arranges its own flotilla at the
start of the game.

Each flotilla has four ships:

• One submarine—Occupies two squares; takes two
  hits to sink.

• One destroyer—Occupies three squares; takes
  three hits to sink.

• One cruiser—Occupies four squares; takes four
  hits to sink.

• One battleship—Occupies five squares; takes five
  hits to sink.

Each square of a play area has a two-digit coordinate
from 00 to 88. The first digit, from 0 to 8, numbers
the horizontal row counting down from the top. The
second coordinate numbers the vertical column
counting left-to-right. Each play area looks like this:

```
00  01  02  03  04  05  06  07  08
10  11  12  13  14  15  16  17  18
20  21  22  23  24  25  26  27  28
30  31  32  33  34  35  36  37  38
40  41  42  43  44  45  46  47  48
50  51  52  53  54  55  56  57  58
60  61  62  63  64  65  66  67  68
70  71  72  73  74  75  76  77  78
80  81  82  83  84  85  86  87  88
```

For each of your four ships, you will enter the row,
column, and direction. For example, suppose you
want your submarine at coordinates 63 and 64, from
left to right (horizontal):

The computer will display: **You type:**

Submarine row? (0–8)←   6 E N T E R
Submarine col? (0–8)←   3 E N T E R
(H)orz or (V)ert?←   H E N T E R

If you try to put one ship on top of another, your

entries will be rejected, and the computer will repeat its requests for coordinates and position.

You and the computer will take turns trying to sink each other's ships. You get four shots per turn, Before each shot, the computer will ask for a row coordinate and a column coordinate for your target. The computer will reject repeat coordinates.

The computer will display the results of your shot: SPLASH! for a miss, or Hit a...(type of ship) for a hit. If you hit and sink a ship, the computer will display: IT SANK! When you finish your four shots, the computer will take its turn.

The game ends when all the ships in one of the flotillas have been sunk. The computer will ask if you want to play again. Press ⓨ for Yes or Ⓝ for No.

Hangman

Hangman can be played by one player against the computer, or by two players against each other.

Insert the cassette containing Hangman. Type ⓒⓁⓄⒶⒹⓒ"ⒽⒶⓃⒼⓂⒶⓃ", and press ⒺⓃⓉⒺⓇ. Press ⒹⒺⒻ ⓢⓟⒶⒸⒺ to start playing Hangman. After the game's name and copyright are displayed, the computer will display:

1 or 2 players?← ←

Press ①ⒺⓃⓉⒺⓇ to play against the computer, or ②ⒺⓃⓉⒺⓇ to play with another person.

If two people are playing, each will take turns supplying a word to be guessed. The word should contain only capital ltters. One player types the word and presses ⒺⓃⓉⒺⓇ. If he misspells the word, he can press ⊝ to type over the mistake, or ⒸⓁⒺⒶⓇ to erase the word.

Once the word is entered, Hangman will display a row of blank lines. There is one blank for each letter in the word. The guessing player chooses a letter and presses the key for that letter.

The computer will run down the line of blanks. Each time a letter is guessed correctly, the letter will fill the blank. If the letter is not in the word, the guess is counted as a miss. If the guesser misses seven times, he loses.

If a letter has already been guessed, and the player presses it again, the computer will beep sharply and reject the entry. This will not count as a miss.

If the guessing player fills all the letters in the word with fewer than seven misses, he wins. After each turn, the computer displays the guesser's score (the number of words guessed correctly out of the total number tried).

At the end of the turn the computer will ask for a new word. The player who guessed the first word now supplies the word to be guessed. The word should contain only capital letters.

Playing Hangman against the computer is exactly like playing against a friend, except that the computer always supplies the word to be guessed.

Press ⓧ to end the game.

Tic-Tac-Toe

Insert the cassette containing Tic-Tac-Toe. Type
ⒸⓁⓄⒶⒹ"ⓉⒾⒸⓉⒶⒸⓉⓄⒺ",
then press (ENTER). Press (DEF)(SPACE) to
start the game. The computer will display the name
and copyright for the game, while the plotter draws
nine squares. The squares, like the PC-2's numeric
keyboard, are numbered in this order:

            7 8 9
            4 5 6
            1 2 3

Keys ①-⑨ represent the nine squares. When the
grid has been drawn, the computer feeds enough
paper to place the entire grid within view. The
computer will display:

            Do you want the first move?

Press (Y) for Yes or (N) for No, then press
(ENTER).

In Tic-Tac-Toe you are "X," and the computer is
"O." Whe it is your turn, the computer will display:
Your Move... The computer will wait for you to press a
number key. When you press the key, the number will
appear on the display, and the computer will draw an
"X" in the square. If you choose a space that has

already been used, an error message will appear for
about a second.

During the computer's turn, the display will be: My
move.... Depending on the game situation, the
computer will take from two seconds up to about five
to think out its next move. Then the computer will
display: I take position (square's number), and place its
"O" in the square. The display will return to: Your
move...

Once a move is entered, the computer will withdraw
the paper, print the move, then return the grid to
view.

The game ends when you or the computer gets three
squares in a row, or when all nine spaces are filled (a
draw). The computer will ask if you want to play
again. Press (Y) for Yes, or (N) for No.

Appendix A—Making a Backup

Making a Backup (copy) of each program cassette insures that your original cassette will not be accidentally erased or become damaged. Use your Backups to run the programs, and store your originals in a safe place.

Though it may be possible to make copies of the program with two cassette decks, or with cassette duplicating equipment, the most reliable way to make a Backup is to use your computer for the procedure. The CTR-80A or the Minisette 9 are recommended for PC-2 tape operations. AC current is more reliable than batteries, but if you must use batteries make sure they are fresh.

Follow these steps to make a backup:

1. Connect the Printer/Cassette Interface to the Cassette Recorder. Install the computer in the Printer/Cassette Interface.

2. Set the volume for the cassette deck. We recommend a volume of 6 for the CTR-80A, and a volume of 10 (maximum volume) for the Minisette 9. If your cassette deck has a tone control, set it to maximum treble.

3. Turn on your PC-2. Make sure the mode is set to either RUN or PRO.

4. To control the cassette player from the buttons on the deck, set the computer's Remote switch to OFF. (Only the computer can control the deck if Remote is ON.)

5. Insert the cassette to be copied in the cassette deck. Rewind or fast foward the tape to the beginning of the program to be copied. Set the remote switch to ON. Set the cassette deck to "Play" mode.

6. To load the program to be copied, type `C` `L` `O` `A` `D` `"` name of program `"` `ENTER` or press `DEF` `I` `ENTER`. The program name need not be typed after `C` `L` `O` `A` `D` `ENTER` if there is only one program on the tape to be copied.

   (You might want to check if the program has been loaded. Turn the remote OFF to rewind the cassette to the beginning of the program. Turn the remote ON, put the cassette deck on "Play" and type `C` `L` `O` `A` `D` `"` name of program `"` `ENTER`. The program has been loaded if the symbol > appears on the display.)

7. When the program has been loaded and the cassette has stopped, remove the original tape and insert a new or completely erased cassette. Turn the remote switch OFF and rewind or advance the tape to the point at which you want the program copy to start. If the copy is to follow another program on the same cassette, leave about ten seconds of space between the two programs. Turn the remote back ON.

8. Put the cassette deck in "Record" mode. Make sure the computer is in either the PRO or the RUN mode. Type ⒞ⓈⒶⓋⒺ⦅"⦆ name of program ⦅"⦆ⒺⓃⓉⒺⓇ. The computer will save the program.

9. To check your new copy, turn the remote switch OFF. Rewind the cassette to the beginning of the program, then turn the remote ON. Put the cassette deck on "Play" and type ⒸⓁⓄⒶⒹ ⦅"⦆ name of program ⦅"⦆ⒺⓃⓉⒺⓇ. The program has been copied if the cassette deck stops at the end of the program, and the symbol > appears on the display.

10. If the Backup did not succeed, the display will show an error message (ERROR 43, for example) while you run the check. If you get an error message, see your PC-2 Owner's Manual and PC-2 Printer/Interface Owner's Manual for lists of error message numbers and their explanations. Try again and if you still get an error message, start the Backup procedure again, using a fresh tape.

11. If you still cannot produce a copy, consult your PC-2 Owner's Manual and PC-2 Printer/Interface Owner's Manual for troubleshooting information.

Appendix B—Maintenance

Maintenance of your Pocket Computer System is not difficult. Follow these simple suggestions:

1. Keep your cassettes in their boxes when not in use. Do not expose the cassettes to extreme heat or cold, or to magnetic fields. Never touch the exposed surface of the cassette.

2. Clean and demagnetize the tape heads in the cassette deck at regular intervals. Follow the recommendations in your Pocket Computer Owner's Manual.

3. For best results, use AC, rather than batteries, for loading and saving.

4. Use only fresh alkaline-type batteries when not operating your system from AC.

5. Always press the cassette deck's "Stop" key immediately after loading or saving a program. This will release the pressure on the rubber roller which pulls the tape and will prevent the roller from developing a permanent "flat" at the point of contact with the tape.

6. Always turn the computer off before installing it or removing it from the Printer/Cassette Interface.

7. After removing the computer from the Printer/Cassette Interface, re-install the protective plug to keep dirt out of the connector on the computer. Never touch the exposed parts on the Interface.
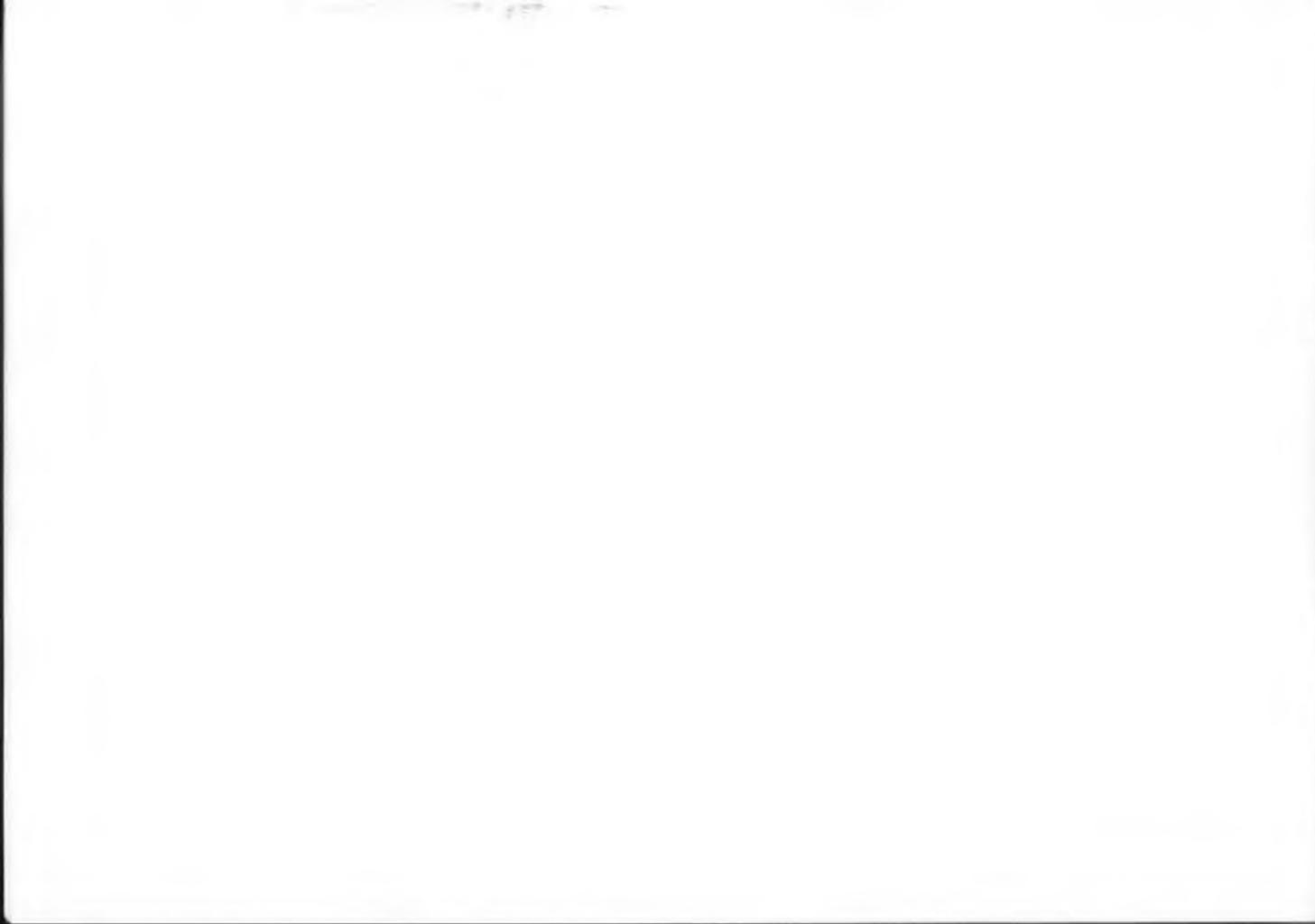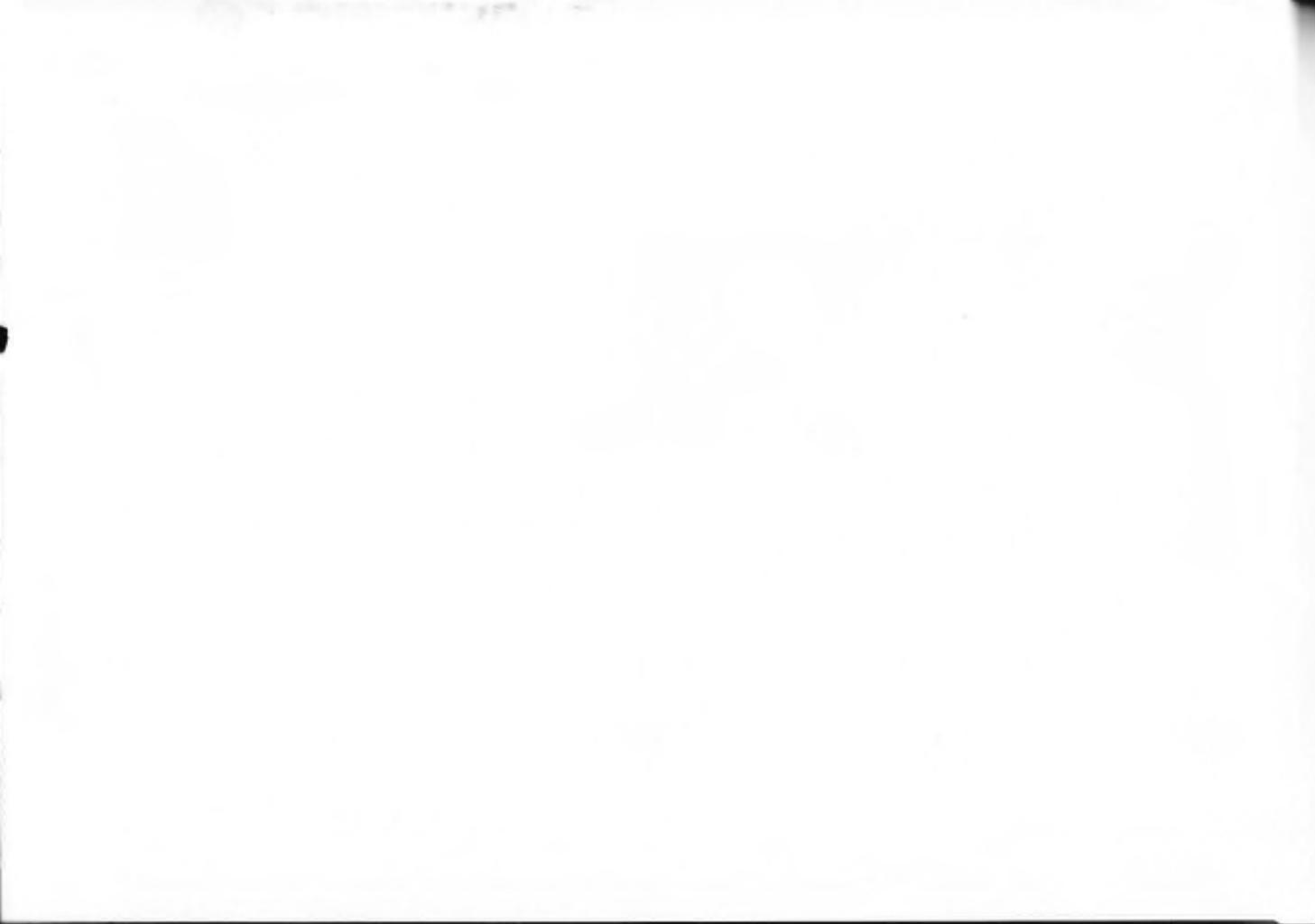
RADIO SHACK, A DIVISION OF TANDY CORPORATION

U.S.A.: FORT WORTH, TEXAS 76102
CANADA: BARRIE, ONTARIO L4M 4W5

TANDY CORPORATION

AUSTRALIA	BELGIUM	U. K.
280-316 VICTORIA ROAD RYDALMERE, N.S.W. 2116	PARC INDUSTRIEL DE NANINNE 5140 NANINNE	BILSTON ROAD WEDNESBURY WEST MIDLANDS WS10 7JN

Printed in USA